

61

**INFORMATION FOR
CLOSURE OF ONE
HAZARDOUS WASTE
CONTAINER STORAGE UNIT**

**BIG WOODS AUTO
CEDAR FALLS, IOWA
EPA ID #IAD981711948**

**PUBLIC COMMENT PERIOD
JUNE 30, 1992 - JULY 30, 1992**

**US ENVIRONMENTAL PROTECTION AGENCY
REGION 7 - KANSAS CITY, KANSAS
CONTACT: PAT FREY (913) 551-7058**



R00127754
RCRA RECORDS CENTER

TABLE OF CONTENTS

Public Notice

Closure Summary

Tentative Approval Letter to Facility

Closure Plan

JUN 18 1992

PUBLIC NOTICE

THE U. S. ENVIRONMENTAL PROTECTION AGENCY (EPA), REGION 7, 726 MINNESOTA AVENUE, KANSAS CITY, KANSAS 66101, IS PROVIDING PUBLIC NOTICE REGARDING CLOSURE OF THE HAZARDOUS WASTE MANAGEMENT UNIT (ONE HAZARDOUS WASTE CONTAINER STORAGE UNIT FOR EACH FACILITY) AT THE BIG WOODS AUTO FACILITY, (EPA ID NO. IAD981711948), 3305 BIG WOODS DRIVE, CEDAR FALLS, IOWA AND COFFMAN BODY SHOP FACILITY, (EPA ID NO. IAD981708001), 1906 STATE STREET, CEDAR FALLS, IOWA.

The EPA has reviewed the Closure Plans submitted by Big Woods Auto and Coffman Body Shop. It has been tentatively determined that the plans are approvable as modified by EPA.

A copy of the closure plans with modifications, and other information, are available for public review at the EPA Region 7 Library from 7:30 a.m. to 4:30 p.m., Monday through Friday; the Cedar Falls Library at 524 Main Street in Cedar Falls, Iowa, from 9:00 a.m. to 9:00 p.m. on Monday through Thursday, from 9:00 a.m. to 5:00 p.m. on Friday, and from 10:00 a.m. to 5:00 p.m. on Saturday; the Iowa Department of Natural Resources (IDNR) Main Office at 900 East Grand Avenue, Des Moines, Iowa from 8:00 a.m. to 4:30 p.m., Monday through Friday; and the IDNR Regional Office at 907 West Main, Manchester, Iowa from 8:00 a.m. to 4:30 p.m., Monday through Friday.

Comments or requests for additional information with respect to the closure plans should be directed in writing to Ms. Pat Frey, EPA - Region 7, RCRA/IOWA, 726 Minnesota Avenue, Kansas City, Kansas 66101, or by telephone at (913) 551-7058. Comments should be submitted prior to the expiration of the public comment period which ends on July 30, 1992.

An EPA public hearing has not been scheduled; however, if requests are received which indicate significant public interest in the closure plans, a public hearing will be scheduled. Requests for a public hearing shall be made in writing to EPA at the address listed above for submittal of comments and shall state the nature of issues proposed to be raised at the hearing. Such requests shall be submitted prior to July 30, 1992.

After consideration of all comments received and of the requirements of the Resource Conservation and Recovery Act (RCRA), EPA will make final closure plan decisions. If the decision is made to approve the plans in forms which are substantially unchanged from the plans as modified by EPA and made available for public comment as announced by this notice, the EPA will notify all persons submitting comments or requesting a notice of final decision. If the final version of the plans are substantially changed, the EPA will issue a public notice indicating the revisions.

CLOSURE SUMMARY

Facility Name: Big Woods Auto

Facility Address: 3305 Big Woods Road
Cedar Falls, Iowa 50613

EPA ID Number: IAD981711948

Facility Point of Contact: Mr. Melvin Cunningham
(319) 987 2638

Unit(s) Undergoing Closure: Hazardous Waste Container
Storage Unit

Wastes Managed in Unit(s): F003, F005

Hazardous Constituents of Concern: Xylene, Tolyene

Closure Activities: Collection and analysis of soil samples

Clean-up Objectives:

HAZARDOUS CONSTITUENT	SOIL, mg/kg	RINSEWATER, mg/l	GROUNDWATER, mg/l
Xylene	1000	NA	NA
Toluene	100	NA	NA



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION VII
726 MINNESOTA AVENUE
KANSAS CITY, KANSAS 66101

JUN 18 1992

CERTIFIED MAIL

Return Receipt Requested

Article Number: P 679 713 758

Mr. Melvin Cunningham
Big Woods Auto
P. O. Box 981
Cedar Falls, IA 50613

Re: Big Woods Auto
Cedar Falls, Iowa
EPA ID No. IAD981711948
Docket No. VII-88-H-0013

Dear Mr. Cunningham:

The U. S. Environmental Protection Agency (EPA) has completed its review of the February 1989 closure plan for the facility referenced above. The closure plan was submitted as required by paragraph 24.a of the December 1988 Consent Agreement and Consent Order, Docket No. VII-88-H-0013. The tentative decision has been made to approve with modifications the closure plan for the hazardous waste management unit (one container storage unit). The EPA herein modifies the closure plan with the inclusion of the modifications listed in the addendum titled "Closure Plan Modifications For the Big Woods Auto Facility, June 1992". The modifications are necessary in order that the closure plan complies fully with the requirements specified in Title 40 Code of Federal Regulations (CFR) Part 264.

The modifications made are summarized below. The reason for each change is also stated.

1. We deleted Section II, which is titled "Closure Plan" and pertains to action levels, since the information contained in this section is not accurate. We replaced this section with the closure plan objectives. This modification is identified as modification number 1.

2. We modified Section II which is titled "Performance Standard" to specify the closure performance standards for each hazardous constituent which may be present at the site against which success of the clean closure effort can be measured. The clean-up target levels of xylene and toluene are within the range of acceptability for Resource Conservation and Recovery Act (RCRA) clean closures. This modification is identified as modification number 2.

3. We modified Section IV which is titled "Sites" to further clarify the boundary of the hazardous waste storage unit at the Big Woods Auto facility. This modification is identified as modification number 3.

4. We deleted all references and information made to the Coffman Auto Body site in the section titled "Soil Sampling Plan." Modification number 4 is necessary because this plan must only pertain to the Big Woods Auto site.

5. We deleted the section titled "Sampling Methodology - Sample Size" and replaced it with the section titled "Soil Sampling Procedures". The basis for modification number 5 is to require that soil samples be collected and analyzed for the constituents of concern from the 12 to 18 inch interval instead of the 0 to 6 inch interval. Soil samples which will be analyzed for volatile organic compounds should be collected from undisturbed soil intervals. In addition, EPA will be collecting split (or duplicate) soil samples in order to determine if additional closure activities are necessary.

6. We deleted the information in the section titled "Sampling Methodology - Sampling Tools, Usage and Decontamination" and replaced it with information specifying the proper sampling techniques which are in accordance with 40 CFR § 264.112(b)(4) and the most recent edition of EPA publication SW-846, "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods." In addition, we specified which laboratory sampling analysis methods from the EPA publication SW-846 are to be followed and the procedures to follow for the decontamination of sampling equipment. This modification is identified as modification number 6.

7. We deleted the section titled "Sampling Methodology - Soil Sample Testing and Report Schedule". The basis for modification number 7 is that the reporting schedule provided was not sufficient to ensure that EPA would receive the thirty (30) days advance notice of a sampling event.

8. We added a section to the closure plan titled "Closure Schedule" which includes a closure schedule and specifies that the facility will notify the EPA, in writing, no less than 30 days prior to the date(s) on which the sampling activity is to occur. In addition, the approved closure plan must be completed within 180 day as required by 40 CFR § 264.113(b). This modification is identified as modification number 8.

9. We added a paragraph to the section titled "Closure Schedule" which requires Big Woods Auto to notify EPA Region VII, in writing, of the discovery of unexpected events which may necessitate a change to the closure plan or of any deviation from

the closure plan schedule due to unforeseen events. This modification is identified as modification number 9.

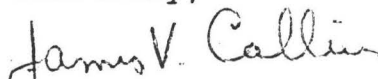
10. We added a section to the closure plan titled "Disposal of Generated Waste and Contaminated Soil" to specify the procedures for handling contaminated soils and hazardous waste generated during closure. This modification is identified as modification number 10.

11. We added the section titled "Closure Certification" to specify that within sixty (60) days of completing the approved closure plan, the owner/operator and an independent, registered professional engineer will provide the required certification and background documentation. This modification is identified as modification number 11.

The 30 day public notice regarding EPA's tentative decision to approve the closure plan is scheduled to begin on June 30, 1992, and end on July 30, 1992. An announcement of the public notice will appear in the local newspaper, the Waterloo Courier, on the first day of the public notice period. A copy of the information being made available for public review is enclosed. You are invited to submit written comments and/or request a public hearing at any time prior to the expiration of the public comment period. All comments submitted during the comment period will be addressed prior to the approval of the plan.

Any questions concerning this letter may be directed to Ms. Patricia Frey, of my staff, at (913) 551-7058.

Sincerely,



for Michael J. Sanderson
Chief, RCRA Branch
Waste Management Division

Enclosures

cc: Ron Coffman, Coffman Auto Body
Pete Hamlin, IDNR

CLOSURE PLAN MODIFICATIONS FOR
THE BIG WOODS AUTO FACILITY

June 1992

Facility: Big Woods Auto Facility
Location: Cedar Falls, Iowa
EPA ID No.: IAD981711948

The following modifications amend the Big Woods Auto Facility closure plan, which is dated February 1988.

1. The information in Section II, which is titled "Closure Plan," (beginning with "Closure activities consist of implementation..." and ending with "achieving the closure plan performance standard.") is deleted. This information is replaced with the following:

"II. CLOSURE PLAN

Big Woods Auto intends to close the hazardous waste container storage unit following the U. S. Environmental Protection Agency's (EPA's) approval of this closure plan. Closure activities include the collection and analysis of soil samples. The planned activities are intended to meet the requirements of Title 40 Code of Federal Regulations (CFR) § 264.111, which is the following:

The owner of operator must close the facility in a manner that:

- (a) Minimizes the need for further maintenance; and
- (b) Controls, minimizes or eliminates, to the extent necessary to protect human health and the environment, post-closure escape of hazardous waste, hazardous constituents, leachate, contaminated run-off, or hazardous waste decomposition products to the ground or surface waters or to the atmosphere; and

(c) Complies with the closure requirements of this subpart, including, but not limited to, the requirements of §§ 264.178, 264.197, 264.228, 264.258, 264.280, 264.310, 264.351, and 264.601 through 264.603."

2. The section titled "Performance Standard" on page 3 of the closure plan is modified to include the following information:

"Clean-up Target Levels. In accordance with 40 CFR § 264.111, this closure plan is designed to insure that the facility will not require further maintenance and control subsequent to the completion of closure activities. This closure plan specifies a "clean closure" (i.e. closure leaving no wastes or waste residues in place).

The hazardous constituents which the clean-up target levels must address, include, but are not limited to, the following constituents: xylene and toluene. The clean-up target levels for these constituents will be as follows:

Hazardous Constituents	Soil, (mg/kg)
Xylene	1000.0
Toluene	100.0

Successful closure of the container storage unit will be achieved when the soil no longer contains hazardous constituents of concern in excess of the clean-up target levels. If concentrations of the hazardous constituents of concern are detected in any of the soil samples in excess of the clean-up target levels, the facility shall proceed to determine the vertical and horizontal extent of soil contamination. Additional sampling will be proposed in a closure plan amendment to EPA within thirty (30) days of receipt of the analytical results in accordance with 40 CFR § 264.112(c). The closure plan amendment requires EPA approval."

3. The following sentence is added to Section IV which is titled, "SITES" and on page 4 of the closure plan:

"The boundaries of the hazardous waste container storage unit at Big Woods Auto consist of the 35 foot by 38 foot storage area and is 0 to 18 inches below the soil's surface. The storage unit is depicted in Exhibit B of the closure plan."

4. The section titled "Soil Sampling Plan" on page 4 of the closure plan has been modified by deleting all references to the Coffman Auto Body site.

5. The complete paragraph of the Section titled "Sampling Methodology - Sample Size" on page 5 (beginning with "Each sample shall consist..." and ending with "ground surface to a depth of six inches.") has been deleted and replaced with the following:

"Soil samples will be collected using a hand auger and split-spoon sampler, or other appropriate boring and sampling devices. Disposal latex gloves will be worn during sampling and will be changed between the collection of each sample. The facility will collect soil samples at the 0 to 6, 6 to 12, and 12 to 18 inch interval below the ground surface at the sampling locations depicted in Exhibit B of the closure plan. A discrete soil sample must be collected from each soil interval. Mixing of a soil interval before collecting a sample is prohibited. Only the discrete soil samples collected from the 12 to 18 inch intervals need to be placed in four-ounce glass containers with Teflon-lined closures supplied by the laboratory. An EPA employee, or authorized representative, may collect and have analyzed the split (or duplicate) soil samples collected from each interval at each boring. All analytical results (facility's and EPA's) will be utilized in determining if additional closure activities, such as soil sampling or excavating contaminated soil, is required."

6. The section titled "Sampling Methodology - Sampling Tools, Usage and Decontamination" on page 5 (beginning with "Each soil sample shall be extracted ..." and ending with "regular licensed EPA hazardous waste hauler.") has been deleted and replaced with the following:

Sample Handling. Soil sample containers will be labeled with facility name, boring and interval identification, date, time of collection, and initials of sampling personnel. The soil samples must then be placed in coolers and preserved to 4°C with cold packs in such a manner as to prevent breakage. Chain of custody forms and appropriate sample request forms will be completed and accompany all samples during shipment to the lab. A sample chain of custody form is presented in Appendix G.

Analytical Methods. All soil samples will be analyzed using EPA-approved methods as outlined in EPA Manual SW-846. Analytical parameters for soil samples were determined based on hazardous waste stored at the container storage unit or suspected constituents present within a waste. The following table presents a summary of the parameters and analytical methods to be followed:

Parameter	Container	Preservation	Analytical Methods ^a	Maximum Holding Times
Xylene	4 oz. glass jar with Teflon-lined lid	Cool to 4°C	8240	14 days
Toluene	4 oz. glass jar with Teflon-lined lid	Cool to 4°C	8240	14 days

^a "Test Methods for Evaluating Solid Waste Physical/Chemical Methods", SW-846

Auger Cuttings. The auger cuttings from the soil sampling activities will be collected, placed in containers and transferred to the temporary storage area identified by the facility. The auger cuttings will be managed in accordance with the criteria presented in the section titled "Disposal of Generated Waste and Contaminated Soil" in the closure plan.

Decontamination of Equipment. Equipment used in soil sample collection will be steamed cleaned or hand washed with water and a nonfoaming detergent and rinsed with distilled water prior to use and between the collection of each sample. The water generated from decontamination activities will be collected and containerized. The containerized decontamination water will be transferred to the hazardous waste storage unit identified by the facility and handled in accordance with the criteria presented in the section titled "Disposal of Generated Waste and Contaminated Soil" in the closure plan.

7. The complete paragraph of the section titled "Sampling Methodology - Soil Sample Testing and Report Schedule" on page 6 (beginning with "Soil sampling must be accomplished..." and ending with "...the soil sample locations are not frozen.") has been deleted.

8. The following section titled "Closure Schedule" is added to the closure plan:

CLOSURE SCHEDULE

<u>Days Following EPA's Approval of Closure Plan</u>	<u>Closure Activity</u>
Day 0	EPA grants final closure plan approval.
By Day 10	Implementation of the approved closure plan begins.
30 days prior to sampling	Notify EPA Region VII of proposed soil sampling dates.
By Day 90	Collect samples of soil and submit to laboratory for analysis.
By Day 120	Obtain sample analytical results from laboratory.
By Day 180	Complete approved closure plan activities.

NOTE: No less than thirty (30) days prior to the date(s) on which the sampling is done to verify clean closure, the owner/operator and/or certifying engineer will notify the EPA in writing of the date(s) on which the sampling activity is to occur in order that the Agency may, if necessary, arrange for an EPA employee or representative to be on-site to observe the sampling to verify clean closure, and obtain split or duplicate samples.

9. The following paragraph has been added to the section titled "Closure Schedule":

"Any deviations from the closure plan schedule due to uncontrollable or unforeseen events, delays due to inclement weather, or the discovery of unexpected events occur which necessitates a change to the closure plan, the owner/operator will notify the EPA, in writing, of the reason for the delay, provide a revised schedule, amend the closure plan as necessary and if applicable request an extension within thirty days of the occurrence of the unexpected event. Extensions to the closure plan period may only be granted by the EPA in accordance with 40 CFR § 264.113."

10. The following section titled "Disposal of Generated Waste and Contaminated Soil" is added to the closure plan:

"All solid waste streams generated during closure, such as equipment decontamination waste and collected rinsewater, are subject to the hazardous waste determination requirement

specified at 40 CFR § 262.11. The waste generated during the closure process will be placed in 55-gallon drums and managed as a hazardous waste until the results of the analysis show them to be otherwise. In accordance with 40 CFR § 261.3, if the waste exhibits one, or more, of the hazardous characteristics specified in 40 CFR § 261 Subpart C, or is a mixture of a listed hazardous waste and a solid waste, then the waste meets the definition of a hazardous waste and must be managed in accordance with all applicable hazardous waste regulations. Hazardous waste will be managed at facilities approved to manage hazardous waste.

Upon excavation, soil which potentially contains hazardous constituents must be placed in containers or tanks and managed as hazardous waste in accordance with 40 CFR § 262.34 until the results of the analysis show them to be otherwise. If the contaminated soil contains listed hazardous waste above the Agency-approved health-based levels, or if the contaminated soil exhibits one, or more, of the hazardous characteristics specified in 40 CFR 261 Subpart C, then the contaminated soil must be managed in accordance with all applicable hazardous waste regulations. Hazardous waste will be managed at facilities approved to manage hazardous waste.

During implementation of the closure plan, hazardous wastes shall not be accumulated in the container storage area undergoing closure. Hazardous wastes accumulated from the date of EPA's approval of the closure plan until the Agency's acceptance of the closure certification required by 40 CFR § 264.115, shall be accumulated in alternate location(s) selected by the facility, and in accordance with the regulations specified in 40 CFR § 262.34."

11. The following section titled "Closure Certification" is added to the closure plan:

"Within sixty (60) days of completion of the approved closure plan, the owner/operator and an independent, registered professional engineer will provide to EPA, by registered mail, the required certification that all closure activities have been performed in accordance with the approved closure plan. Documentation furnished with the certification statements must include, but not be limited to, photographs of closure activities with closure observation narrative, chain-of-custody forms, laboratory reports, analytical data with the results summarized, a comparison of the closure performance standards to the sample analysis results, and manifest forms."

46A

ESTRADA, INC.

d/b/a

COFFMAN BODY SHOP

AND

MEL CUNNINGHAM

d/b/a

BIG WOODS AUTO

CLOSURE PLAN

EPA ID# 1AD981708001

RE: Estrada, Inc. d/b/a
Coffman's Body Shop
E.P.A. I. D. #IIAD981708001
Docket No. VII 88-H-0014

Mel Cunningham d/b/a
Big Woods Auto
Docket No. VII 88-H-0013

RECEIVED
FEB 14 1989
IOWA SECTION

TABLE OF CONTENTS

I.	INTRODUCTION.	1
II.	CLOSURE PLAN.	2
III.	PERFORMANCE STANDARD.	3
IV.	SOIL SAMPLE PLAN.	4
V.	COST ESTIMATE	7

EXHIBITS

- A. Aerial Photo with Site Plan - 1906 State Street
Cedar Falls, Iowa
- B. Aerial Photo with Site Plan - Big Woods Road
Cedar Falls, Iowa
- C. Lucite Acrylic Lacquer
Material Safety Data Sheet
- D. Lacquer Thinners and Cleaning Solvents
Material Safety Data Sheet
- E. Sample Chain of Custody Certification
- F. Material Safety Data Sheet dated 10-20-83
- G. Material Safety Data Sheet dated 1-14-85

I. INTRODUCTION

On February 3, 1987, EPA Field Inspector, David Whiting visited Coffman's Body Shop at 1906 State Street, Cedar Falls, Iowa, to perform an EPA inspection. He determined that Coffman was a small generator of hazardous waste with the 100-1000 kg per month vategory, by viture of waste paint and paint thinner.

Coffman's stored the waste materials on site in 55 gallon drums and had a sixteen month accumulation of waste located there. Prior to that time, Coffman's had done business at another location and had removed its waste containing drums to a location on Big Woods Road, Cedar Falls, Iowa, owned by Mel Cunningham. Estrada, Inc. d/b/a Coffman's Body Shop, Ron Coffman it's operations officer, and Mel Cunningham, d/b/a Big Woods Auto were cited for exceeding permitted storage terms. Both Coffman's and Cunningham have agreed to implement a clean closure plan to demonstrate that no spillage of waste paint or thinner took place, or in the alternative, if any contamination is found, to take appropriate action in light of the findings and the threat posed to environment or to human health. No known spillage has taken place at either location. Cunningham was a mere accomodation party on behalf of Coffman's uin providing a temporary storage location. Accordingly Coffman's Body Shop has taken the responsibility for implementing closure at both locations.

II. CLOSURE PLAN

Closure activities consist of implementation of the soil sampling plan to determine if spillage of waste paint thinner (designation F003) occurred at either the 1906 State Street or the Big Woods location and, if so, whether the levels exceed an action level.

- A. Determination of an action level will be by reference to the soil sampling plan and comparison of the analysis results at each location to the background levels established by U. S. Soil Conservation Service, EPA, and Iowa State University.
- B. No Action Level. If the comparison of analysis results demonstrates that the levels do not pose a contamination or potential harm to the environment or to human health, the closure plan shall be deemed to have been fully implemented with no further maintenance or controls subsequent to the completion of closure activities and closure certification shall proceed accordingly.
- C. Action Level. In the event the analysis results demonstrate levels of contaminants which pose a potential harm to the environment or to human health, action must be taken to meet the closure plan performance standard. For the purpose of this closure plan, the "closure plan performance standard" is defined to mean that all soil at the location designated must be decontaminated to analytic concentrations found in a background control sample taken at that location, or decontaminated to an EPA approved health-based standard.
- D. Action Plan. If soil contamination at or above the action level is identified, a subsequent and more extensive soil sampling program will define the vertical and horizontal extent of the contamination and will be used to define the area of contamination. A site map will be developed after engineering review of the data, for use by excavation crews to perform their work. The area will be carefully staked out and all contaminated soils will be excavated and transported in accordance with all EPA rules and regulations including disposal at approved hazardous waste sites. Subsequent testing of remaining soil will confirm that the closure plan performance standard has been achieved.
- E. Certification of Closure. Certification of closure will be accomplished by Coffman's report of closure activities appropriate to the implementation of the

closure plan, including the certification of the supervising engineer, the sampling plan, the chain of custody log, the laboratory results, appropriate manifests and evaluation of decontamination.

- F. Post-Closure Plan. If the closure plan performance standard cannot be achieved, a post-closure plan will be developed based on the analysis and impediments encountered in achieving the closure plan performance standard.

III. PERFORMANCE STANDARD

The closure plan is considered to be the minimal effort to be undertaken by the owner. The goal and performance standard to be achieved are determination that no concentrations of volatile organic compounds or heavy metals are present at any level which pose a threat to the environment or to human health.

The testing and analysis must be accomplished in accordance with the material safety data sheets attached hereto as Exhibits C and D, which identify the metals and substances at which this hazardous waste activity and determination is directed.

SOIL SAMPLING PLAN

IV. SITES.

This soil sampling plan shall be conducted at two (2) locations.

- A. 1. The Coffman Site is 1906 State Street, Cedar Falls, Iowa. Exhibit A attached is an aerial photograph depicting the site with accompanying sketch depicting the location of sample sites. The five samples taken at the Coffman site will be designated in accordance with the location of each sample as depicted on Exhibit A and will be labeled accordingly as Samples C-1, C-2, C-3, C-4 and C-5.
- 2. The Coffman site is hard packed gravel, dirt, sand and stone. It is flat.
- 3. The Coffman site is selected as the proposed sampling location because it is the exact location of the barrels observed by the EPA field inspector on February 3, 1987, and if spillage occurred would be the location of the spillage. The purpose of this sampling plan is to determine if spillage occurred at this location.
- B. 1. The Cunningham Site is Big Woods Road, Cedar Falls, Iowa. Exhibit B attached is an aerial photograph depicting the site with accompanying sketch depicting the location of sample site. The five samples taken at the Big Woods Road site will be designated in accordance with the location of each sample as depicted on Exhibit B and will be labeled accordingly as Samples BW-1, BW-2, BW-3, BW-4 and BW-5.
- 2. The Big Woods site is light sandy loam soil with a covering of indigenous native grasses. It is flat.
- 3. The Big Woods site is selected as the proposed sampling location because it is the exact location of the storage barrels observed by the EPA field inspector on February 3, 1987, and if spillage occurred would be the location of the spillage. The purpose of this sampling plan is to determine if spillage occurred at this location.

C. SAMPLING METHODOLOGY.

1. Engineering Supervision and Chain of Custody Assurance.

Supervision of the sampling procedure will be accomplished by the City Engineer's office of the City of Cedar Falls, Iowa. The Supervisor is a professional engineer (P.E. designation) with emphasis in civil engineering. The engineer will certify that samples were taken in accordance with this plan including certification of each sample site, use of sample methodology according to this plan, sample labeling according to this plan, and delivery of the samples to the laboratory.

The engineer must maintain each sample in his possession and custody from the extraction of the sample until delivery of the samples to the laboratory and must certify a chain of custody of samples consisting of the Engineer and the laboratory and excluding any other person.

2. Sample Size.

Each sample shall consist of a uniform soil core or "plug" not less than two inches in diameter. Each sample core shall extend from the ground surface to a depth of six inches.

3. Sampling Tools, Usage and Decontamination.

Each soil sample shall be extracted by use of a clean new steel cylinder having a diameter of not less than two inches and a length of not less than six inches. Each steel cylinder shall be used to extract one soil sample only and shall not be reused. The application of manual power to each cylinder when placed in an upright position at each sample location will assure the soil sample core or "plug" obtained is of uniform diameter and depth and is representative of each soil sample location. Each soil core cylinder will be appropriately labeled after extraction (ex. C-1, C-2) and the labeled steel cylinder with soil core contents will be sealed into a new ziplock plastic container.

The sealed container, steel cylinder and soil core sample contents will be delivered to the laboratory by the supervising engineer and held pending test results and analysis.

In the event that the testing and analysis indicates hazardous wastes are present and have contaminated the sampling tools, the tools will be decontaminated at the Coffman, 1906 State Street site using a detergent cleaner. The cleaner will be added to Coffman's liquid hazardous waste storage and will be manifested offsite by Coffman's regular licensed EPA hazardous waste hauler.

4. Soil Sample Holding Time.

Both soil sampling sites, all personnel and the laboratory are venued in Cedar Falls, Iowa. No travel or shipment is required in excess of fifteen statute miles. The soil sample holding time will be measured in hours from obtaining the sample until delivery to the laboratory. The laboratory testing and analysis procedures must not exceed ten days. The entire soil sample holding period will be in accordance with EPA Publication SW-846 and must not exceed fourteen days.

5. Soil Samples Field Preservation.

After extraction all soil samples must be transported and stored in insulated containers with a temperature not exceeding four degrees celsius in compliance with EPA SW-846.

6. Soil Sample Testing and Report Schedule.

Soil sampling must be accomplished not later than 30 days after the EPA approval of the closure plan, provided the soil sampling shall not take place until and unless the outside air temperature exceeds 40 degrees fahrenheit and the soil sample locations are not frozen.

Laboratory testing and analysis reports must be furnished to the EPA not later than fourteen days after soil sampling.

7. Site Coordination and Safety.

The project coordination will be provided by the company management in interface with the supervising engineer, the EPA and the laboratory.

The health and safety of the project participants must be observed as paramount. Risk from extremes of weather, mechanization, contamination, or any other risk unforeseen may cause cessation, postponement, and rescheduling of said sampling in the consensus of the participants or the company safety officer.

D. Testing and Analysis.

The laboratory performing the testing and analysis is:

National Environmental Testing, Inc.
1922 Main Street
P.O. Box 625
Cedar Falls, Iowa 50613

Test methods must be in accordance with EPA publication SW-846. "Test methods for Evaluating Solid Waste", and the laboratory shall so certify in its analysis report.

V. CLOSURE COST ESTIMATE

The estimated cost of closure is the following:

A.	Materials for sampling -	\$ 100.00
B.	Laboratory Testing -	\$1,200.00
C.	Certification -	\$ 100.00
D.	Contingency for Action level -	<u>\$2,000.00</u>
	Total	\$3,400.00

-001
8.9 AC.

2-31B

ENLARGED VIEW
SHOWING LOCATION
OF TEST HOLES 1-5

-002
11.8 AC.

-003
2.6 AC.

Big Woods Road
Cedar Falls, Iowa

302.1'

-004
240 AC.

-005

-006

-007

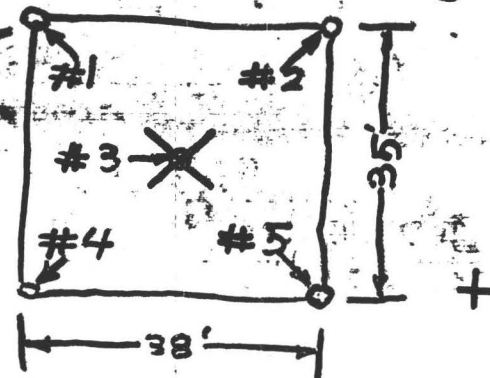
-008

680'

100'

303'

152'



MATERIAL SAFETY DATA SHEET

September 1, 1985

LUCITE® ACRYLIC LACQUER

Section I

Manufacturer

E. I. du Pont de Nemours & Co. (Inc.)
 Finishes & Fabricated Products Dept.
 Wilmington, Delaware 19898
 Telephone: Product information (800) 441-7515
 Medical emergency (800) 441-3637
 Transportation emergency (800) 424-9300
 (CHEMTREC)

Product: Lucite acrylic lacquer
 D.O.T. Hazard Class: Flammable Liquid
 Paint UN 1263

Section II — Hazardous Ingredients (See Section X for information on selected products which have additional ingredients)

Primary Ingredients	CAS No.	Vapor Pressure (20°C mm Hg.)	Exposure Limits*
Toluene	108-88-3	29	100ppm-A, 200ppm-O
Primary Amyl Acetate	628-63-7	4	100ppm-A
Xylene	1330-20-7	8	100ppm-A, O
1-Methoxy-2-Propanol			
Acetate	108-65-6	2.4	100ppm-D
Acrylic Resin	None	None	None

*A = ACGIH TLV O = OSHA D = Du Pont internal limit

Section III — Physical Data

Evaporation rate: Slower than ether
 Vapor density: Heavier than air
 Solubility in water: Slight
 Percent volatile: 63.4-84.0% (By volume)
 Approximate boiling range: 129°F-401°F
 Density: 7.6-11.1 #/gallon

Section IV: Fire & Explosion Data

Flash point (Method): 20-73F (Closed cup).
 Approx. flammable limits: 1.1-14%.
 Extinguishing media: Foam, carbon dioxide, dry chemical
 Special fire fighting procedures: Full protective equipment, including self-contained breathing apparatus, is recommended. Water from fog nozzles may be used to cool closed containers to prevent pressure build up.
 Unusual fire & explosion hazards: When heated above the flash point, emits flammable vapors which, when mixed with air, can burn or be explosive. Fine mists or sprays may be flammable at temperatures below the flash point.

Section V — Health Hazard Data (See Also Section X Notes)

Ingestion: Gastro-intestinal distress.
 In the unlikely event of ingestion, call a physician immediately and have names of ingredients available.
 Inhalation: May cause nose and throat irritation. May cause nervous system depression characterized by the following

progressive steps: headache, dizziness, nausea, staggering gait, confusion, unconsciousness. 1-Methoxy-2-propanol acetate may cause moderate eye burning and can be absorbed through the skin in harmful amounts. Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage. If affected by inhalation of vapor or spray mist, remove to fresh air. If breathing difficulty persists, or occurs later, consult a physician.

Skin or eye contact: May cause irritation or burning of the eyes. Repeated or prolonged liquid contact may cause skin irritation with discomfort and dermatitis.
 In case of eye contact, immediately flush with plenty of water for at least 15 minutes; call a physician.
 In case of skin contact wash with soap and water. If irritation occurs, contact a physician.

Section VI — Reactivity Data

Stability: stable
 Incompatibility (materials to avoid): none reasonably foreseeable
 Hazardous decomposition products: CO, CO₂, smoke, oxides of heavy metals reported in Section X
 Hazardous polymerization: will not occur

Section VII — Spill or Leak Procedures

Steps to be taken in case material is released or spilled:
 Ventilate area. Remove sources of ignition. Prevent skin contact and breathing of vapor. Confine and remove with inert absorbant.
 Waste disposal method: Do not allow material to contaminate ground water systems. Incinerate absorbed material in accordance with federal, state and local requirements. Do not incinerate in closed containers.

Section VIII — Special Protection Information

Respiratory: Do not breathe vapors or mists.
 Wear a properly fitted vapor/particulate respirator approved by NIOSH/MSHA (TC-23C) for use with paints during application and until all vapors and spray mist are exhausted. Follow the respirator manufacturer's directions for respirator use.
 Ventilation: Provide sufficient ventilation in volume and pattern to keep contaminants below applicable OSHA requirements.
 Protective clothing: Neoprene gloves and coveralls are recommended.
 Eye protection: Desirable in all industrial situations. Include splash guards or side shields.

Section IX — Special Precautions

Precautions to be taken in handling and storing: Observe label precautions. Keep away from heat, sparks and flame. Close container after each use. Ground containers when pouring. Wash thoroughly after handling and before eating or smoking. Do not store above 120°F.

Section IX — Special Precautions — Continued

Other precautions: Do not sand, flame cut, braze or weld dry coating without a NIOSH/MSHA approved respirator or appropriate ventilation.

Section X — Notes

Product Code	Additional Ingredients	Product Code	Additional Ingredients
401L, 402L	4, 11, 12	447L	1, 7, 8, 9, 12, 13
405L	12	450L	3, 10, 12
406L	6, 11, 12	451L	2, 3, 12
411L, 412L, 413L	1, 7	452L	2, 12
417L	8, 11	453L	1, 10, 12
420L	9	454L	13
428L	10, 12	465L	9, 12, 13, 14, 15, 16
434L	11	467L	11, 12
436L	2, 5, 12	475L	8, 9, 12, 13, 15, 16
437L	2, 5, 11	485L	1, 7, 9, 13, 14
442L	1	494L, 495L	1, 7

Additional Ingredients	CAS No.	Vapor Pressure (20°C mm Hg.)	Exposure Limits*
(1) VM&P Naphtha	64742-89-8	~45	100ppm-A, 0
Laboratory studies with rats have shown that petroleum distillates cause kidney damage and kidney or liver tumors. These effects were not seen in similar studies with guinea pigs, dogs, or monkeys. Several studies evaluating petroleum workers have not shown significant increases of kidney damage nor kidney or liver tumors.			
(2) Lead Chromate	18454-12-1	None	50ug/m ³ -O as LEAD 150ug/m ³ -A as LEAD 0.05mg/m ³ -A as CR 0.1 mg/m ³ -O as CR

Lead chromate is an IARC/OSHA carcinogen. Overexposure to lead may cause adverse effects to the blood forming, nervous, urinary and reproductive systems including embryotoxic effects. Symptoms may include loss of appetite, anemia, disturbance of sleep and fatigue. (See OSHA Standard 29CFR1910.1025 for more information on lead)

(3) Antimony	7440-36-0	None	0.5mg/m ³ -A as Sb
Excessive exposures to antimony may produce gastrointestinal upset, nervous complaints, inflammation of the mucous membranes of the nose and throat, metallic taste and stomatitis. May cause skin irritation. Antimony is present in lead chromate. See lead chromate (2).			

(4) Titanium Dioxide	13463-67-7	None	10mg/m ³ -A, 15mg/m ³ -O
----------------------	------------	------	---

In a lifetime inhalation test, lung cancers were found in some rats exposed to 250 mg/m³ respirable titanium dioxide dust. Analysis of the titanium dioxide concentrations in the rats' lungs showed that the lung clearance mechanism was overwhelmed and that the results at the massive 250 mg/m³ level are not relevant to the workplace

(5) Lead Molybdate	7439-98-7	None	10mg/m ³ -A as MO
(See also lead in ingredient (2))			

(6) Carbon Black	1333-86-4	None	3.5mg/m ³ -A
------------------	-----------	------	-------------------------

(7) Aluminum	7429-90-5	None	10mg/m ³ -A
--------------	-----------	------	------------------------

(8) Butyl Acetate	123-86-4	8	150ppm-A, 0
Extremely high concentrations of butyl acetate have caused blood changes and weakness in laboratory animals.			

(9) Isopropyl Alcohol	67-63-0	44	400ppm-A, 0
-----------------------	---------	----	-------------

(10) Methanol	67-56-1	125	200ppm-A, 0
---------------	---------	-----	-------------

Excessive human exposure to methanol, including absorption through the skin, may lead to: fatigue, headache, anesthetic neurologic effects, and visual difficulties ultimately including blindness

(11) Methyl Isobutyl Ketone	108-10-1	20	50ppm-A, 150ppm-O
-----------------------------	----------	----	-------------------

(12) Ethyl Acetate	141-78-6	74	400ppm-A
--------------------	----------	----	----------

Repeated exposures of laboratory animals to extremely high concentrations of ethyl acetate resulted in secondary anemia with an increase in white blood cells; fatty degeneration, cloudy swelling and an excess of blood in various organs.

(13) Acetone	67-64-1	186	750ppm-A, 1000ppm-O
--------------	---------	-----	---------------------

(14) Methyl Ethyl Ketone	78-93-3	95	200ppm-A, 0
--------------------------	---------	----	-------------

High concentrations of methyl ethyl ketone have caused embryotoxic effects in laboratory animals. Methyl ethyl ketone may cause abnormal kidney function.

(15) Dibasic Esters			
a.) Dimethyl glutarate	119-40-0	14 (at 100°C)	10mg/m ³ -D
b.) Dimethyl succinate	106-65-0		
c.) Dimethyl adipate	627-93-0		

Inhalation overexposure in rats has shown mild injury to the olfactory region of the nose.

(16) 465L, 475L	Do not contain primary amyl acetate or xylene		
-----------------	---	--	--

*A = ACGIH TLV O = OSHA D = Du Pont internal limit

The data in this material safety data sheet relate only to the specific material designated herein and do not relate to use in combination with any other material or in any process.

Product Manager
Refinish Sales

MATERIAL SAFETY DATA SHEET

April 15, 1987

LACQUER THINNERS AND CLEANING SOLVENTS

Section I

Manufacturer

E. I. du Pont de Nemours & Co. (Inc.)
Automotive Products Dept.
Wilmington, Delaware 19898
Telephone: Product information (800) 441-7515
Medical emergency (800) 441-3637
Transportation emergency (800) 424-9300
(CHEMTREC)

Product: Lacquer Thinners and Cleaning Solvents

D.O.T. Hazard Class: Flammable Liquid

Paint Related Material NA 1263

Hazardous Materials Identification System:

H = 2, F = 3, R = 0.

Section II — Hazardous Ingredients (See Section X for ingredients listed by product code)

Ingredients	CAS No.	Vapor Pressure (20°C mm Hg.)	Exposure Limits*
1. Butyl acetate	123-86-4	8	150ppm-A,O; 200ppm-A-(STEL)
* 2. N-Butyl alcohol	71-36-3	5.5	100ppm-A; 25ppm-D; 50ppm-C, A
* 3. Acetone	67-64-1	184	750ppm-A; 1000ppm-O; 1000ppm-A-(STEL)
4. Methyl alcohol	67-56-1	100	200ppm-A,O,D; 250ppm-A-(STEL)
* 5. Toluene	108-88-3	36.7	100ppm-A, 200ppm-O; 150ppm-A-(STEL); 300ppm-C-O
* 6. Isopropyl alcohol	67-63-0	33	400ppm-A,O; 500ppm-A-(STEL)
* 7. Dibasic esters			
a) Dimethyl glutarate	119-40-0	14 (at 100°C)	10mg/m ³ -D
b) Dimethyl succinate	106-65-0		
c) Dimethyl adipate	627-93-0		
* 8. Propylene glycol monomethyl ether acetate	108-65-6	3.8	Unknown
* 9. Ethylene glycol monobutyl ether acetate	112-07-2	0.3	25ppm-S; 20ppm-O
10. Xylene	1330-20-7	25	100ppm-A,O; 150ppm-A-(STEL)
* 11. Aromatic hydrocarbon	64742-95-6	10	25ppm-O; 50ppm-D
* 12. VM&P naphtha	64742-89-8	15	100ppm-D; 300ppm-A; 500ppm-O
13. Medium mineral spirits	64742-88-7	10	100ppm-A,D; 500ppm-O

*A = ACGIH TLV, O = OSHA, D = Du Pont internal limit,
S = Supplier Furnished Limit, STEL = Short Term Exposure
Limit (15 mins.), C = Ceiling

Section III — Physical Data

Evaporation rate: Slower than ether
Solubility in Water: Miscible
Vapor Density: Heavier than air
Boiling Range: 54-225°F

Gal. Weight (#/Gal): 6.54-7.76
Volume % volatile: 100
Weight % volatile: 100
V.O.C. (#/Gal): 6.54-7.76

Section IV — Fire & Explosion Data

Flash point (Closed cup): Below 20°F: 3602S, 3608S, 3613S,
3642S, 3661S, 3696S, 3924S; 20-73°F: 3939S; 73-100°F:
3919S, 3929S; Above 100°F: 3979S

Approx. flammable limits: 0.8-36.5 percent.

Extinguishing media: Water spray, foam, carbon dioxide, dry chemical.

Special fire fighting procedures: Full protective equipment, including self-contained breathing apparatus, is recommended. Water from fog nozzles may be used to cool closed containers to prevent pressure build up.

Unusual fire & explosion hazards: When heated above the flash point, emits flammable vapors which, when mixed with air, can burn or be explosive. Fine mists or sprays may be flammable at temperatures below the flash point.

Section V — Health Hazard Data

General effects

Ingestion: Gastro-intestinal distress.

In the unlikely event of ingestion, call a physician immediately and have the names of ingredients available.

Inhalation: May cause nose and throat irritation. Repeated and prolonged overexposure to solvents may lead to permanent brain and nervous system damage. Eye watering, headaches, nausea, dizziness and loss of coordination are all signs that solvent levels are too high.

If affected by inhalation of vapor or spray mist, remove to fresh air. If breathing difficulty persists, or occurs later, consult a physician.

Skin or eye contact: May cause irritation or burning of the eyes. Repeated or prolonged liquid contact may cause skin irritation with discomfort and dermatitis.

In case of eye contact, immediately flush with plenty of water for at least 15 minutes; call a physician.

In case of skin contact, wash with soap and water. If irritation occurs, contact a physician.

Specific effects

Butyl Acetate: Extremely high concentrations have caused blood changes and weakness in laboratory animals. N-Butyl Alcohol: Liquid splashes in the eye may result in chemical burns. Methyl Alcohol: Excessive human exposure to Methanol may lead to fatigue, headache, anaesthetic, neurologic effects, and visual difficulties including blindness or death. Recurrent overexposure may result in liver and kidney injury. Can be absorbed through the skin in harmful amounts. Toluene: Recurrent overexposure may result in liver and kidney injury. High airborne levels have produced irregular heart beats in animals and occasional palpitations in humans. Rats exposed to very high airborne levels have exhibited high frequency hearing deficits. The significance of this to man is unknown. Isopropyl Alcohol: Ingestion studies on laboratory animals showed that very high oral doses caused increased liver and kidney weights. High oral doses have caused anemia in laboratory animals. Dibasic Esters: High airborne levels in rats have shown mild injury to the olfactory region of the nose. Propylene Glycol Monomethyl Ether Acetate: May cause moderate eye burning. Recurrent overexposure may result in liver and kidney injury.

Ethylene Glycol Monobutyl Ether Acetate: Can be absorbed through the skin in harmful amounts. May destroy red blood cells. May cause abnormal kidney function. Xylene: High concentrations have caused embryotoxic effects in laboratory animals. Recurrent overexposure may result in liver and kidney injury. Can be absorbed through the skin in harmful amounts. VM&P Naphtha and Medium Mineral Spirits: Laboratory studies with rats have shown that petroleum distillates cause kidney damage and kidney or liver tumors. These effects were not seen in similar studies with guinea pigs, dogs, or monkeys. Several studies evaluating petroleum workers have not shown significant increases of kidney damage nor kidney or liver tumors.

Section VI — Reactivity Data

Stability: stable
Incompatibility (materials to avoid): none reasonably foreseeable
Hazardous decomposition products: CO, CO₂, smoke
Hazardous polymerization: will not occur

Section VII — Spill or Leak Procedures

Steps to be taken in case material is released or spilled: Ventilate area. Remove sources of ignition. Prevent skin contact and breathing of vapor. Wear a properly fitted vapor/particulate respirator (NIOSH/MSHA TC-23C). Confine and remove with inert absorbant.
Waste disposal method: Do not allow material to contaminate ground water systems. Incinerate absorbed material in accordance with federal, state, and local requirements. Do not incinerate in closed containers.

Section VIII — Special Protection Information

Respiratory: Do not breathe vapors or mists.
Wear a properly fitted vapor/particulate respirator approved by NIOSH/MSHA (TC-23C) for use with paints during application and until all vapors and spray mists are exhausted. In confined spaces or in situations where continuous spray operations are typical or if proper respirator fit is not possible, wear a positive

pressure, supplied-air respirator (TC-19C). In all cases, follow the respirator manufacturer's directions for respirator use. Do not permit anyone without protection in the painting area.

Ventilation: Provide sufficient ventilation in volume and pattern to keep contaminants below applicable OSHA requirements.

Protective clothing: Neoprene gloves and coveralls are recommended.

Eye protection: Desirable in all industrial situations. Include splash guards or side shields.

Section IX — Special Precautions

Precautions to be taken in handling and storing: Observe label precautions. Keep away from heat, sparks and flame. Close container after each use. Ground containers when pouring. Wash thoroughly after handling and before eating or smoking. Do not store above 120°F.

Other precautions: Do not sand, flame cut, braze or weld dry coating without a NIOSH/MSHA approved respirator or appropriate ventilation.

Section X — Hazardous Ingredients by Product Code

Product Code	Ingredients (See Section II)
3602S	2, 3, 5, 6, 7, 8, 9, 11, 12
3608S	3, 4, 5, 6, 7, 8, 10, 12
3613S	3, 5, 6, 12
3642S	1, 3, 4, 5, 6, 8, 12
3661S	2, 3, 5, 6, 7, 8, 11, 12
3696S	3, 5, 6, 7, 8, 10, 12
3919S	13
3924S	3, 5, 6, 12
3929S, 3939S	5, 13
3979S	8, 9, 11, 13

Notice: The data in this material safety data sheet relate only to the specific material designated herein and do not relate to use in combination with any other material or in any process.

Product Manager
Refinish Sales

Exhibit E

MATERIAL SAFETY DATA SHEET

FOR COATINGS, RESINS AND RELATED MATERIALS

NPCA 1-72

(Similar to Form OSHA-20)

Date of PREP: 10/20/83

SECTION I

Manufacturer's Name: PPG Industries, Inc. Coatings & Resins Group

Address: 3800 W. 143rd Street -Cleveland, Oh 44111

Attn: Technical Manager, AutoRefinish

Emergency Telephone: (304) 843-1300

Product Class: SOLVENT BLEND

Manufacturer Code: DTL10

Trade Name: LACQUER THINNER

(122082D)

SECTION II - HAZARDOUS INGREDIENTS

INGREDIENTS	% WEIGHT	*TLV(1984)	**PPG IPEL	CASNO	LEL	V.P.
TOLUENE	45	100.00	PPM	108-88-3	1.2	22.4
2-PROPANONE	20	750.00	PPM	67-64-1	2.6	186.0
ALIPHATIC HYDROCARBON	15	.NE	.	64742-89-8	1.2	120
ISOPROPYL ALCOHOL, ANHYDROUS	15	400.00	PPM	67-63-0	2.0	33
PROPYLENE GLYCOL METHYL ETHER ACETATE	< 5	.NE	.	108-65-6	1.3	3.7

SECTION III - PHYSICAL DATA

Boiling Range: 57-110 DEG.C.

Vapor Density - HEAVIER THAN AIR

Evaporation Rate = SLOWER THAN ETHER

% Volatile/Vol: 100.0

Wt/Gal: 6.65

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

DOT Category: EXTREMELY FLAMMABLE

Flashpoint: 4.00 DEG.F. PMCC

LEL: 1.5

Extinguishing Media:

USE NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) CLASS B EXTINGUISHERS (CARBON DIOXIDE, DRY CHEMICAL OR ALCOHOL FOAM) DESIGNED TO EXTINGUISH NFPA CLASS IB FLAMMABLE LIQUID FIRES.

Unusual Fire & Explosion Hazards:

KEEP CONTAINERS TIGHTLY CLOSED. ISOLATE FROM HEAT, ELECTRICAL EQUIPMENT, SPARKS AND OPEN FLAME. CLOSED CONTAINERS MAY EXPLODE WHEN EXPOSED TO EXTREME HEAT. DO NOT APPLY ON HOT SURFACES.

Special Fire Fighting Procedures:

WATER SPRAY MAY BE INEFFECTIVE. WATER MAY BE USED TO COOL CLOSED CONTAINERS TO PREVENT PRESSURE BUILD-UP AND POSSIBLE AUTOIGNITION OR EXPLOSION WHEN EXPOSED TO EXTREME HEAT. IF WATER IS USED, FOG NOZZLES ARE PREFERABLE.

SECTION V - HEALTH HAZARD DATA

Threshold Limit Value: SEE SEC. II

Effects of Overexposure:

INHALATION: ANESTHETIC. IRRITATION OF THE RESPIRATORY TRACT OR ACUTE NERVOUS SYSTEM DEPRESSION CHARACTERIZED BY THE FOLLOWING PROGRESSIVE STEPS: HEADACHE, DIZZINESS, STAGGERING GAIT, CONFUSION, UNCONSCIOUSNESS, OR COMA.
SKIN OR EYE CONTACT: PRIMARY IRRITATION.

Emergency and First Aid Procedures:

FUMES: REMOVE FROM EXPOSURE. RESTORE BREATHING. KEEP WARM AND QUIET. NOTIFY A PHYSICIAN. SPLASH (EYES): FLUSH IMMEDIATELY WITH COPIOUS QUANTITIES OF RUNNING WATER FOR AT LEAST 15 MINUTES. TAKE TO A PHYSICIAN FOR DEFINITIVE MEDICAL TREATMENT. SPLASH (SKIN): WASH AFFECTED AREAS WITH WATER. REMOVE CONTAMINATED CLOTHING. CONSULT A PHYSICIAN.

SECTION VI - REACTIVITY DATA

STABILITY: STABLE Conditions to Avoid: UNKNOWN

Incompatibility (Materials to Avoid): UNKNOWN

Hazardous Decomposition Products:

May produce hazardous fumes when heated to decomposition.

Fumes may contain: Carbon Monoxide and

Hazardous Polymerization - WILL NOT OCCUR

CONDITIONS TO AVOID: UNKNOWN

REMOVE ALL SOURCES OF IGNITION (FLAMES, HOT SURFACES, AND ELECTRICAL, STATIC, OR FRICTIONAL SPARKS). AVOID BREATHING VAPORS. VENTILATE AREA. REMOVE WITH INERT ABSORBENT AND NON-SPARKING TOOLS.

Waste Disposal Method:

DISPOSE IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS. DO NOT INCINERATE CLOSED CONTAINERS.

SECTION VIII - SPECIAL PROTECTION INFORMATION**Respiratory Protection:**

FOR EMERGENCIES OR WORKING IN CONFINED AREAS, WEAR SELF-CONTAINED BREATHING APPARATUS OR SUPPLIED AIR RESPIRATORY PROTECTION. IN OTHER CIRCUMSTANCES INVOLVING POTENTIAL OVER EXPOSURES, USE MSHA-APPROVED ORGANIC VAPOR RESPIRATOR.

Ventilation:

PROVIDE GENERAL DILUTION OR LOCAL EXHAUST VENTILATION IN VOLUME AND PATTERN TO KEEP THE CONCENTRATION OF HAZARDOUS INGREDIENTS IN SEC.II BELOW THE LOWEST SUGGESTED EXPOSURE LIMIT, AND LEL IN SEC.IV BELOW STATED LIMIT.

Protective Gloves:

REQUIRED FOR PROLONGED OR REPEATED CONTACT.

Eye Protection:

USE SAFETY EYEWEAR DESIGNED TO PROTECT AGAINST SPLASH OF LIQUIDS.

Other Protective Equipment:

PREVENT PROLONGED SKIN CONTACT TO CONTAMINATED CLOTHING.

SECTION IX - SPECIAL PRECAUTIONS**Precautions to be Taken in Handling and Storing:**

DO NOT STORE ABOVE 120 F. STORE LARGE QUANTITIES IN BUILDINGS DESIGNED AND PROTECTED FOR STORAGE OF NFPA CLASS IB FLAMMABLE LIQUIDS.

Other Precautions:

REPEATED OVEREXPOSURES TO SOLVENT VAPORS MAY CAUSE PERMANENT BRAIN AND NERVOUS SYSTEM DAMAGE. INTENTIONAL MISUSE BY DELIBERATELY CONCENTRATING AND INHALING THE CONTENTS CAN BE HARMFUL OR FATAL. EYE WATERING, HEADACHES, OR DIZZINESS ARE INDICATIONS THAT SOLVENT LEVELS ARE TOO HIGH. OVEREXPOSURE MAY BE PREVENTED BY ENSURING VENTILATION CONTROLS, VAPOR EXHAUST OR FRESH AIR ENTRY. PROTECTIVE DEVICES SUCH AS A RESPIRATOR (MINIMUM NIOSH/MSHA TC-23C SPECIFICATION), GLOVES AND CLOTHING MAY ALSO LIMIT EXPOSURE.

DO NOT TAKE INTERNALLY. CONTAINERS SHOULD BE GROUNDED WHEN POURING. AVOID FREE FALL OF LIQUID IN EXCESS OF A FEW INCHES.

Exhibit F

MATERIAL SAFETY DATA SHEET

FOR COATINGS, RESINS AND RELATED MATERIALS

NPCA 1-72

(Similar to Form OSHA-20)

Date of PREP: 01/14/85

SECTION I

Manufacturer's Name: PPG Industries, Inc. Coatings & Resins Group
Address: 3800 W. 143rd Street -Cleveland, Oh 44111

Attn: Technical Manager, AutoRefinish

Emergency Telephone: (304) 843-1300

Product Class: SOLVENT BLEND

Manufacturer Code: **DTL16**

Trade Name: ALL PURPOSE LACQUER THINNER

(030684D)

SECTION II - HAZARDOUS INGREDIENTS

INGREDIENTS	% WEIGHT	*TLV(1984)	**PPG IPEL	CASNO	LEL	V.P.
2-PROPANONE	30	750.00 PPM	.	67-64-1	2.6	186.0
TOLUENE	20	100.00 PPM	.	108-88-3	1.2	22.4
ALIPHATIC HYDROCARBON	15	.NE	.	64742-89-8	1.2	120
XYLENE	15	100.00 PPM	.	1330-20-7	1.1	6.3
ISOPROPYL ALCOHOL, ANHYDROUS	10	400.00 PPM	.	67-63-0	2.0	33
PROPYLENE GLYCOL METHYL ETHER ACETATE	5	.NE	.	108-65-6	1.3	3.7

SECTION III - PHYSICAL DATA

Boiling Range: 57-145 DEG.C.

Vapor Density - HEAVIER THAN AIR

Evaporation Rate = SLOWER THAN ETHER % Volatile/Vol: 100.0 Wt/Gal: 6.63

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

DOT Category: EXTREMELY FLAMMABLE

Flashpoint: 5 DEG.F. PMCC

LEL: 1.6

Extinguishing Media:

USE NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) CLASS B EXTINGUISHERS (CARBON DIOXIDE, DRY CHEMICAL OR ALCOHOL FOAM) DESIGNED TO EXTINGUISH NFPA CLASS IB FLAMMABLE LIQUID FIRES.

Unusual Fire & Explosion Hazards:

KEEP CONTAINERS TIGHTLY CLOSED. ISOLATE FROM HEAT, ELECTRICAL EQUIPMENT, SPARKS AND OPEN FLAME. CLOSED CONTAINERS MAY EXPLODE WHEN EXPOSED TO EXTREME HEAT. DO NOT APPLY ON HOT SURFACES.

Special Fire Fighting Procedures:

WATER SPRAY MAY BE INEFFECTIVE. WATER MAY BE USED TO COOL CLOSED CONTAINERS TO PREVENT PRESSURE BUILD-UP AND POSSIBLE AUTOIGNITION OR EXPLOSION WHEN EXPOSED TO EXTREME HEAT. IF WATER IS USED, FOG NOZZLES ARE PREFERABLE.

SECTION V - HEALTH HAZARD DATA

Threshold Limit Value: SEE SEC. II

Effects of Overexposure:

INHALATION: ANESTHETIC. IRRITATION OF THE RESPIRATORY TRACT OR ACUTE NERVOUS SYSTEM DEPRESSION CHARACTERIZED BY THE FOLLOWING PROGRESSIVE STEPS: HEADACHE, DIZZINESS, STAGGERING GAIT, CONFUSION, UNCONSCIOUSNESS, OR COMA.
SKIN OR EYE CONTACT: PRIMARY IRRITATION.

Emergency and First Aid Procedures:

FUMES: REMOVE FROM EXPOSURE. RESTORE BREATHING. KEEP WARM AND QUIET. NOTIFY A PHYSICIAN. SPLASH (EYES): FLUSH IMMEDIATELY WITH COPIOUS QUANTITIES OF RUNNING WATER FOR AT LEAST 15 MINUTES. TAKE TO A PHYSICIAN FOR DEFINITIVE MEDICAL TREATMENT. SPLASH (SKIN): WASH AFFECTED AREAS WITH WATER. REMOVE CONTAMINATED CLOTHING. CONSULT A PHYSICIAN.

SECTION VI - REACTIVITY DATA

STABILITY: STABLE Conditions to Avoid: UNKNOWN

Incompatibility (Materials to Avoid): UNKNOWN

Hazardous Decomposition Products:

May produce hazardous fumes when heated to decomposition.

Fumes may contain: Carbon Monoxide and

Hazardous Polymerization - WILL NOT OCCUR

CONDITIONS TO AVOID: UNKNOWN

REMOVE ALL SOURCES OF IGNITION (FLAMES, HOT SURFACES, AND ELECTRICAL, STATIC, OR FRICTIONAL SPARKS). AVOID BREATHING VAPORS. VENTILATE AREA. REMOVE WITH INERT ABSORBENT AND NON-SPARKING TOOLS.

Waste Disposal Method:

DISPOSE IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS. DO NOT INCINERATE CLOSED CONTAINERS.

SECTION VIII - SPECIAL PROTECTION INFORMATION**Respiratory Protection:**

FOR EMERGENCIES OR WORKING IN CONFINED AREAS, WEAR SELF-CONTAINED BREATHING APPARATUS OR SUPPLIED AIR RESPIRATORY PROTECTION. IN OTHER CIRCUMSTANCES INVOLVING POTENTIAL OVER EXPOSURES, USE MSHA-APPROVED ORGANIC VAPOR RESPIRATOR.

Ventilation:

PROVIDE GENERAL DILUTION OR LOCAL EXHAUST VENTILATION IN VOLUME AND PATTERN TO KEEP THE CONCENTRATION OF HAZARDOUS INGREDIENTS IN SEC.II BELOW THE LOWEST SUGGESTED EXPOSURE LIMIT, AND LEL IN SEC.IV BELOW STATED LIMIT.

Protective Gloves:

REQUIRED FOR PROLONGED OR REPEATED CONTACT.

Eye Protection:

USE SAFETY EYEWEAR DESIGNED TO PROTECT AGAINST SPLASH OF LIQUIDS.

Other Protective Equipment:

PREVENT PROLONGED SKIN CONTACT TO CONTAMINATED CLOTHING.

SECTION IX - SPECIAL PRECAUTIONS**Precautions to be Taken in Handling and Storing:**

DO NOT STORE ABOVE 120 F. STORE LARGE QUANTITIES IN BUILDINGS DESIGNED AND PROTECTED FOR STORAGE OF NFPA CLASS IB FLAMMABLE LIQUIDS.

Other Precautions:

REPEATED OVEREXPOSURES TO SOLVENT VAPORS MAY CAUSE PERMANENT BRAIN AND NERVOUS SYSTEM DAMAGE. INTENTIONAL MISUSE BY DELIBERATELY CONCENTRATING AND INHALING THE CONTENTS CAN BE HARMFUL OR FATAL. EYE WATERING, HEADACHES, OR DIZZINESS ARE INDICATIONS THAT SOLVENT LEVELS ARE TOO HIGH. OVEREXPOSURE MAY BE PREVENTED BY ENSURING VENTILATION CONTROLS, VAPOR EXHAUST OR FRESH AIR ENTRY. PROTECTIVE DEVICES SUCH AS A RESPIRATOR (MINIMUM NIOSH/MSHA TC-23C SPECIFICATION), GLOVES AND CLOTHING MAY ALSO LIMIT EXPOSURE.

DO NOT TAKE INTERNALLY. CONTAINERS SHOULD BE GROUNDED WHEN POURING. AVOID FREE FALL OF LIQUID IN EXCESS OF A FEW INCHES.

Exhibit A

CUSTODY CERTIFICATION

I, _____, state that I am a professional engineer and employed by the City of Cedar Falls, Iowa. On this _____ day of _____, 1989, I supervised the extraction and labeling of soil samples from the 1906 State Street and Big Woods Road locations. I took custody of the samples immediately and delivered them to National Environmental Testing, Inc., Cedar Falls, Iowa, and obtained receipt therefor. The samples were labeled:

_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Date

Signature

Printed Name

Address

Phone

I hereby acknowledge receipt of the above labeled samples on this _____ day of _____, 1989.

NATIONAL ENVIRONMENTAL TESTING, INC.

By _____